

REMARKS

By this amendment, claims 1-4, 10 and 11 have been amended and claims 12-19 have been newly added. Claims 1-19 are currently pending in the application, of which claim 1 and 12 are independent claims. In view of the above amendments and the following Remarks, Applicant respectfully requests reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Claim Objection

In the Office Action, claims 1 and 10 have been objected to for informalities. In this response claim 1 has been amended to replace "the front gate line" with --a gate line of an adjoining pixel region on a previous rows--. Also, claim 10 has been amended to replace "the volume of overlapping between" with --a size of an overlapped area between--.

It is believed that, upon this amendment, the informalities in claims 1 and 10 have been corrected. Accordingly, Applicant respectfully requests withdrawal of the objection.

Rejections Under 35 U.S.C. §102

Claims 1-6, 9 and 11 stand rejected under 35 U.S.C. §102(e) as being anticipated by U. S. Patent No. 6,476,881 issued to Ozaki, *et al.* ("Ozaki"). Applicant respectfully traverses this rejection for at least the following reasons.

Amended independent claim 1 recites:

"A thin film transistor array substrate for a liquid crystal display, comprising:

...

repair members provided corresponding to the pixel regions,

wherein each repair member is *extended from the pixel electrode* of the corresponding pixel region and overlaps a gate line of an adjoining pixel region on a previous rows, or *extended from the gate line* of the adjoining pixel region on the previous row and overlaps the pixel electrode of the corresponding pixel region”

In this regard, Ozaki discloses a method for repairing a defect in a gate line. As shown in FIG. 27, when the gate line 13a is disconnected at point 41, the lead-out portion 33b of the gate line 13a (on the right side of the disconnected point 41) and the pixel electrode 27b are electrically connected. Also, the gate line 13a (on the left side of the disconnected point 41) and the source electrode 21b are electrically connected.

This forms a conductive path between two disconnected the gate line 13a on the right side of the point 41 the gate line 31a on the left side of the point 41 via the source electrode 21b, the pixel electrode 27b and the lead-out portion 33b. Of course, the drain electrode 17b is disconnected from the data line 11b at the point 47. Therefore, in Ozaki, *the lead-out 33b is extended from the gate line 13a which transfers a gate signal to the pixel electrode 27b*. Thus, the gate line 13a and the pixel electrode 27b belong to the same pixel region.

However, in the present invention, in the case the repair member is extended from a gate line, the repair member is extended from “*a gate line of a pixel region on a previous row*”, not from the pixel region of the same row. An example of this feature is shown in FIG. 8, in which the repair members 25 are extended from the gate lines of the previous rows.

As explained above, Ozaki fails to disclose “each repair member is ... extended from the gate line of the adjoining pixel region on the previous row and overlaps the pixel electrode of the corresponding pixel region”. Also, Ozaki does not disclose a repair member being extended from

the pixel electrode of the corresponding pixel region and overlapping a gate line of an adjoining pixel region on a previous rows.

For this reason, it is submitted that independent claim 1 is patentable over Ozaki. Claims 2-6, 9 and 11 that are dependent from claim 1 would be also patentable at least for the same reason. Accordingly, Applicant respectfully requests that the rejection over claims 1-6, 9 and 11 be withdrawn.

Rejections Under 35 U.S.C. §103

Claims 7 and 10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Ozaki in view of U. S. Patent No. 5,909,263 issued to Song ("Song"). Applicant respectfully traverses this rejection for at least the following reasons.

Claims 7 and 10 are dependent from claim 1. As previously mentioned, claim 1 has been amended and is now believed to be patentable over Ozaki. Song discloses an amorphous silicon layer 22 has a contact hole 10. However, Ozaki does not disclose either (a) a repair member being extended from the pixel electrode of the corresponding pixel region and overlapping a gate line of an adjoining pixel region on a previous rows, or (b) a repair member being extended from the gate line of the adjoining pixel region on the previous row and overlapping the pixel electrode of the corresponding pixel region.

Since, none of the applied references discloses this claimed feature, claim 1 is patentable over Ozaki and Song. Claims 7 and 10 that are dependent from claim 1 would be also patentable at least for the same reason. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 7 and 10.

In the Office Action, claim 8 stands rejected under 35 U.S.C. §103(a) over Ozaki in view of U. S. Patent No. 5,999,155 issued to Satou ("Satou"). This rejection is respectfully traversed.

Claim 8 is dependent from claim 1. As previously mentioned, amended claim 1 is believed to be patentable over Ozaki. Satou is directed to increasing the contact reliability between the pixel electrode 10 and source electrode 40. In FIG. 1A of Satou, the pixel electrode 10 has an extended portion which overlaps the gate line 21. However, the extended portion of the pixel electrode 10 is not even remotely related to any kind of repairing function. In fact, as described in column 5, lines 14-19, the extended portion is intended for forming storage capacitance C_{ST} between the pixel electrode 10 and the gate line 21. This is further evidenced by the fact that there is no storage capacitor line assembly (e.g., storage capacitor line 28 of the present application) in FIG. 1A of Satou.

Thus, it is respectfully submitted that the extended portion from the pixel electrode 10 of Satou does not correspond to the claimed repair member. As explained above, none of the cited reference a *repair member* that is "extended from the pixel electrode of the corresponding pixel region and overlaps a gate line of an adjoining pixel region on a previous rows", as recited in claim 1. Hence, Applicant submits that claim 1 is patentable over Ozaki and Satou.

Also, in the Office Action, the Examiner asserted "It would have been obvious to a person of ordinary skilled in the art at the time of the invention to protrude the pixel electrode to overlap the gate line as taught by Satou in the device of Ozaki et al. to increase yield and reduce cost". This assertion is respectfully disagreed with.

As shown in FIG. 4 of Ozaki, the pixel structure of Ozaki is already provided with a storage capacitor line 23, which overlaps with its respective pixel electrodes 27a and 27b to create storage capacitance. Thus, there is *no merit or necessity* to modify the pixel electrode 27a

to have an extension portion that overlaps with the gate line 13b. In fact, forming such an extension portion would increase cost and decrease yield because it would complicate the manufacturing process. Hence, it is submitted that there is no motivation for the asserted combination.

Thus, it is submitted that claim 1 is patentable over Ozaki and Song. Claim 8 that is dependent from claim 1 would be also patentable at least for the same reason. Accordingly, Applicant respectfully requests withdrawal of the rejection of claim 8.

Other Matters

In this response, claims 1-4, 10 and 11 have been amended for better wording and informality correction purposes.

Also, claims 12-19 have been newly added to claim the invention with a different perspective. Support for the added claims may be found at least in Figures 1, 2, 3, 4A, 4B, 5A, 5B, 6 and 8 and their corresponding description portions of the specification.


CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicant respectfully submits that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicant's undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,


Hae-Chan Park
Reg. No. 50,114

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McGuireWoods LLP
1750 Tysons Boulevard
Suite 1800
McLean, VA 22102-4215
Tel: 703-712-5365
Fax: 703-712-5280
HCP:WSC/bjb

\\COM\209734.2